Hello, Northeast Ohio Counties!

Looks like the weather forecast for the remainder of this month will be a little soggy and cooler. However, great progress was made in the field last week and much more will go in the ground today and on Wednesday before the rains is predicted to return. Let’s hope a lot of the rain skirts around us!

Our grape producers did get snipped by a frost at the beginning of the month and two recap articles have been included in today’s issue. Many of our committees are selecting their scholarship recipients. A lot of fine students received Ag Scholarships and the Ashtabula County Beef Scholarship winners were selected last night (watch for winners in next week’s issue).

Have a good and safe week!

David Marrison
Extension Educator
Ag & Natural Resources
Ashtabula County

Lee Beers
Extension Educator
Ag & Natural Resources
Trumbull County
Lyme Disease Symposium in Andover on May 26

A Lyme Disease Symposium will be held this Friday, May 26, 2017 from 6:00 to 9:00 p.m. at the ACC-Family Life Center located at 150 Stillman Avenue in Andover, Ohio. May is Lyme disease awareness month and residents are invited to attend a multidisciplinary symposium on Lyme disease education and awareness.

The keynote speaker for this event is Dr. Charles Ray Jones, MD who is a pediatric Lyme disease specialist from New Haven, Connecticut who has treated over 15,000 children with Lyme disease both in the US and abroad, and he will be sharing his knowledge and expertise.

Other speakers include: Dr. Elena Frid is a Pediatric and Adult Autoimmune Neurologist and Lyme Specialist from NYC, who will share her knowledge of neurological Lyme disease and Dr. Kenneth Liegner is a LLMD who practices in NY and has years of experience treating complex cases of Lyme disease. Dr. Charles Curie, DVM is a local veterinarian who is passionate about Lyme disease education and awareness, and he will share his knowledge of Lyme disease in the animal population. Also speaking will be Megan Tilton is a Lyme disease warrior, who will share her personal story of her journey through diagnosis and treatment of Lyme disease.

Question and answer session to follow. Tickets by donation will be available at the door or by visiting: https://www.eventbrite.com/e/lyme-disease-symposium-tickets-32820644431?aff=efbevent

Northeast Ohio Crop Report, May 21, 2017
By: Les Ober CCA, Geauga County OSU Extension

The weather for planting crops in Ohio has not been ideal. Right now NE Ohio is in better shape than most of the counties in the Western part of the state. Corn appears to be around 70% planted and soybeans are now 30 to 40 % planted. The biggest problem facing growers is applying a weed control spray in a timely manner. The fields have been wet up until last week and winds have been brisk. Custom Applicators are running behind schedule. Here are some suggestions that may help if you have not addressed the problem weeds now growing in your fields.

With NOAA Weather predicting a wet ending to the month of May many farmers just want to get the crop in the ground and deal with weed control after the crop is planted. They also want to do this in a timely manner. Using no-till or vertical tillage is often a quick solution to preparing soil and planting the crop. If you have fields where weeds are emerging, tillage is a good alternative but you have to use a machine that will turn over the soil on the surface and dislodge the weeds. Vertical tillage machines do a good job of chopping up surface residue but the machines do not always dislodge 100% of the deep rooted weeds. Within a few days many of the weeds will start to grow again. Within a week or 10 days you will end up with patches of weeds across the field. The weeds are now too big to be controlled by a residual herbicide and if they are herbicide resistant you may not be able to control them with herbicides like Roundup. The logical plan would be to switch to a herbicide that will burndown the emerged weeds.

The problem is that confronts growers at this time of year is that weeds like Marestail have emerged and have started to bolt. Earlier in the season a choice would have been to use 24D + Glyphosate + Metribuzin. With the above mix applied in early May you were able to control
emerging weeds and put down a residual to prevent future emergence. You needed to wait 7 days before planting but it was still early. Fast forward to the end of May, you have not been able to get in the field to spray and the weeds are now larger and harder to control. Now substituting a product like Sharpen for 24D would be a good choice. Although not as economical as 24D, Sharpen can be sprayed up to 3 days after planting. The down side is that it cannot be combined with products like Authority, Valor or Fierce because of a risk of PPO overload and possible crop injury you must wait 14 days to plant after application. OSU Weeds Specialist Mark Loux recommends using Sharpen at 1 oz. + Canopy + Metribuzin @ 8 to 10 oz.

Remember you are not out of the woods yet because you still may have to control late emerging grasses and that can be handled with a Post application of glyphosate. Do not think you can dodge the grass control because, out of control Marestail will hurt you, but out of control Foxtail, will kill you. Also do not leave Metribuzin out of this treatment because you still need to have some residual control of weeds that have not emerged. Products like Sharpen take care of what has emerged but do little to control what is coming next.

Maybe you are thinking about just biting the bullet and switching to Liberty or Roundup Ready to Extend Beans. The problem is that you still need to start with a clean field, use a residual herbicide and at least with Liberty a post application. The other problem is that many seed dealers are running out of Liberty soybean seed. I strongly recommend you do your homework before you attempt to use an ExtendiMax Products. First check your field and make sure they do not boarder a sensitive crop field. That includes you neighbors soybean field’s because they are most likely not Roundup Ready to Extend beans. Next make sure you have the right tips in the sprayer, set the right pressure and apply the right amount of gallons per acre. Make sure the wind and temperature are within the prescribed parameters. Get out the tape measure and plot out your buffer setbacks just in case you have to use them. Also as with any pesticide application make sure you know your neighbors and carefully apply the product next to their property. Before you spray go on line and check out the latest information on tank mixes and spray tips or check with your dealer. You really need to study both the product label, the supplemental labels and talk to your dealer before you dive in.

Ohio Applicator Forecast and Weather Update
Jim Noel,
Source: https://agcrops.osu.edu/newsletter/corn-newsletter/2017-14/ohio-applicator-forecast-and-weather-update

Weather Outlook: The wetter than normal pattern will likely continue into the first half of June now. Weather models have been trending wetter and that is important to note. The risk is increasing toward the wetter side the next 30-days. This applies to much of the corn belt as well not just Ohio.

The outlook for the rest of May is for cooler and wetter than normal. It appears we have a rain event this week later Wednesday into part of Thursday then again for the weekend. Each event will average a half inch to inch but there will be variability from 0.25 inches to 1.5 inches.
Even next week there could be another system about the middle of next week. It does not appear we will have a five day dry period for hay crops anytime in the next two weeks. The outlook for June is wetter and warmer than normal. Temperatures in June appear to be about 2 degrees above normal. Rainfall will average up to 1 inch above normal. It still appears a switch to drier will occur sometime for July and August. The outlook for the next two weeks calls for widespread 2-4 inches of rain across much of Ohio. Normal is 2 inches. See the latest NOAA/NWS/OHRFC 16-day rainfall average forecast.

Runoff Forecast Tool:
On another topic, there is a great new runoff forecast tool to help the agriculture industry. It is hosted by the Ohio Department of Agriculture. It is worth checking out.

The Ohio Applicator Forecast is a new online tool designed to help nutrient applicators identify times when the potential nutrient loss from a fertilizer or manure application is low. The Ohio Applicator Forecast takes data from the National Weather Service, predicting potential for runoff to occur in a given area. The forecast takes snow accumulation and melt, soil moisture content and forecast precipitation and temperatures into account, giving farmers substantial information when they are making nutrient application decisions.

“The National Weather Service is excited to work with Ohio in their efforts to help farmers reduce nutrient runoff across the Midwest,” said Brian Astifan, the Development and Operations Hydrologist with the National Weather Service Ohio River Forecast Center in Wilmington, Ohio. “We believe Ohio’s partnership with several federal agencies and educational institutions to develop this decision-support tool will benefit farmers and ultimately work towards improving Ohio’s water quality.”

ODA will continue to reach out to farmers and applicators in the coming months to make them aware of these new and beneficial tools. For the Ohio Applicator Forecast, individuals can visit http://agri.ohio.gov/divs/plant/OhioApplicatorForecast/oaf.aspx.

See example of the runoff tool below:
Small Grains Field Day Scheduled for June 13

The OARDC Schaffter Farm located at 3240 Oil City Rd., Wooster, will be the host location for the 2017 Small Grains Field Day scheduled for Tuesday, June 13. Registration is now being accepted for the event which runs from 9:30 am and concluding around 3:15 pm. In addition to looking at how small grains are used as a grain crop the field day will also provide information and demonstrations about wheat quality and use in food products, small grains as cover crops, alternative forages, and how small grains fit into row cropping systems.

Participants will have the opportunity to walk through research plots, take part in hands-on activities and view equipment demonstrations. Both commercial and private pesticide applicator credits as well as Certified Crop Advisor (CCA) credits will be offered to field day participants. Topics that will be covered at the Small Grains Field Day include:

- Wheat Disease Identification and Management: Pierce Paul OSU Extension Wheat Disease Specialist
- Wheat Breeding to Develop Disease Resistant Varieties: Clay Sneller, The Ohio State University, Wheat Breeding and Genetics
- Wheat Quality Evaluation: Byung-Kee Baik, USDA-ARS Wheat Quality Lab
- Winter Two-row Malting Barley Development: Robin Coffman, Research Assistant, Stockinger Lab
- Use of Small Grain Cover Crops in Soybean Production (Crimping and planting demonstrations): Mike Sword, OARDC Superintendent Farm Operations and Scott Ruck, ATI Farm Operations Manager - Crops
- Small Grain Baleage: Rory Lewandowski, Wayne County Extension
- The Importance of Wheat Harvest Date: Laura Lindsey OSU Extension Soybean Specialist
- Wheat Nitrogen and Growth Promoter Application Demonstrations: Mike Sword, OARDC Superintendent Farm Operations and Scott Ruck, ATI Farm Operations Manager - Crops
- Kernza: A New Perennial Small Grain Under Development, Steve Culman, OSU Extension Soil Fertility Specialist
- Reduced Lignin Alfalfa: Getting More with Less, Angie Parker OSU Forage Graduate Student
- Organic oats and Red Clover Plots (optional 3:15 – 4:00 pm session): Gerald Reid, Manager, Farm Operations, OARDC Badger Farm

Pre-registration is requested. The cost is $25/person if registered by June 5. Late registration after June 5 is $35/person. Registration includes handout materials, lunch and refreshments. Registration is available on-line at: http://regonline.com/smallgrains or registration forms and checks (Made payable to Ohio State University Extension) can be sent to the Wayne County Extension office at 428 West Liberty Street, Wooster OH 44691. An informational flyer and field day registration form is available on-line at: http://go.osu.edu/smallgrainsfieldday

The Small Grains Field Day is sponsored by the following organizations:
- Ohio Agricultural Research and Development Center (OARDC)
- Ohio State University ATI
- Ohio State University Extension
- Ohio Certified Seed Association
- Ohio Corn & Wheat Board
- Ohio Soybean Council
Frost Damage Update in Northeast Ohio
By Andy Kirk, Research Specialist & Manager, AARS-Kingsville

Many vineyards in Northeast Ohio experienced damaging frosts on the mornings of May 8th and 9th. At the Ashtabula Agricultural Research Station (AARS), temperatures reached 30.4 degrees and 30.8 degrees on the mornings of the 8th and 9th, respectively. Most growers I've spoken to observed that the Monday morning frost did more damage than the Tuesday frost. Frost damage at AARS was limited to instances where early varieties, such as Chardonnay, were located in colder, low-lying areas. At the time of the frost, Chardonnay had two to three leaves unfolded. In the worst hit sections of that vineyard, I estimate that 50 per cent of primary shoots were damaged. On a property-wide basis, I estimate that 2% of our primary shoots were injured due to this frost.

As has been observed in previous local frost events, it appears that the key factors determining which local sites experienced damage were:

1) Elevation above sea level: the higher the less frost damage
2) Distance from Lake Erie: the closer the less frost damage
3) Stage of shoot development: the less development, the less frost damage

Some vineyards suffered severe losses. Among the worst hit appear to be those Vitis Labrusca vineyards along State Route 307 and relatively low-lying areas of South River Road. It should be said that other vineyards along these roads were undamaged or had minimal damage. Vitis Labrusca varieties are earlier to bud-break, and therefore had shoots as long as 6” at the time of the frost. While during the onset of bud-break, a bud may be tolerant of temperatures as low as 28F, the critical temperature approaches 30F as new leaves and shoots develop at: http://msue.anr.msu.edu/topic/grapes/weather_climate/how_cold_can_grapes_go

Thus, more advanced varieties were especially vulnerable.

I've heard from several growers with vineyards at higher elevation sites, such as those on Routes 528 and 534, south of the Grand River. Temperatures did not go below freezing at several of these sites, and not low enough to damage young shoots at others. Likewise, higher elevation sites on South River Road, and its intersecting roads, appear to have sustained less frost damage. Vineyard sites further north on the beach ridges, including those at AARS, experienced minimal damage.
On a more practical note, many growers remarked that the inversion layer was relatively weak during this frost event. When I ran the wind machine last October, I noted that it took roughly 20 minutes at full speed to achieve a 6 degree swing in temperature. I ran the wind machine for several hours on Monday the 8th, and raised the temperature by no more than 4 degrees before the sun came out. The previous day was very cool, and it stands to reason that there was not a lot of warm air to mix around.

That said, four degrees may have made all the difference in this case. A few days later, I spoke to a local grower who is considering the purchase of a wind machine. I crunched the numbers for a 15 acre vineyard, as to whether this machine would have paid for itself on Monday morning. Let’s assume it took a 50 per cent loss away from a typical yield of 5 tons/acre, and that the value of the grapes, whether through selling them or avoiding the outside purchase of them, is $2000/ton. That difference in revenue would have paid for two Orchard-Rite wind machines in one night.

**Last Week’s Frost Damage Update**

By: Imed Dami & Diane Kinney - The Ohio State University

Current situation: The month-long stretch between mid-April to mid-May is the typical frost threat period from southern to northern Ohio, respectively. Vineyards almost dodged the bullet without frost injury this year until last week. On May 8th and 9th, minimum temperatures hovered around or dropped below 32oF in several locations in Ohio. At that time, all grapevines had already broken buds and/or reached shoot growth of more than 12” long. Since the new growth is sensitive to temperatures just below freezing, several varieties, exposed to those temperatures, sustained injury. Table 1 shows the lowest temperatures (27.7oF to 36.9oF) recorded on May 8th at OARDC stations throughout the state. It appears that the northeast and southwest regions experienced the coldest temperatures. Reports of injury to grapevines also corresponded to those areas. Since the May 8th event was a radiative frost, its impact was sporadic and localized rather than widespread.
Table 1.

<table>
<thead>
<tr>
<th>Region/County (City)</th>
<th>Station Name</th>
<th>Date</th>
<th>Min. Temp. (°F)</th>
<th>Date</th>
<th>RH (%)</th>
<th>Dew Point (°F)</th>
<th>GDD (1 Jan to 7 May)</th>
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<tbody>
<tr>
<td>North East</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Ashtabula (Kingsville)</td>
<td>Ashtabula ARS</td>
<td>5/8/17</td>
<td>30.6</td>
<td>5/8/17</td>
<td>94.7</td>
<td>23.9</td>
<td>206</td>
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<td>Lake (Perry)</td>
<td>Perry Station</td>
<td>5/8/17</td>
<td>32.3</td>
<td>5/8/17</td>
<td>92.4</td>
<td>30.3</td>
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<td>Wayne (Wooster)</td>
<td>OARDC – Wooster</td>
<td>5/8/17</td>
<td>29.7</td>
<td>5/8/17</td>
<td>96.5</td>
<td>28.8</td>
<td>314</td>
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<tr>
<td>Lorain (Avon)</td>
<td>Avon Station</td>
<td>5/8/17</td>
<td>34.7</td>
<td>5/8/17</td>
<td>96.1</td>
<td>33.7</td>
<td>278</td>
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<td></td>
<td></td>
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<td>Huron (Willard)</td>
<td>Muck Crops ARS</td>
<td>5/8/17</td>
<td>31.3</td>
<td>5/8/17</td>
<td>93.6</td>
<td>29.7</td>
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<td>Sandusky (Fremont)</td>
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<td>5/8/17</td>
<td>72.5</td>
<td>27.8</td>
<td>261</td>
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<td>Wood (Custar)</td>
<td>Northwest ARS</td>
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<td>33.4</td>
<td>5/8/17</td>
<td>78.7</td>
<td>27.5</td>
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<td>Franklin (Columbus)</td>
<td>OSU Campus</td>
<td>5/8/17</td>
<td>36.9</td>
<td>5/8/17</td>
<td>68.6</td>
<td>27.6</td>
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<td>South East</td>
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<tr>
<td>Jackson (Jackson)</td>
<td>Jackson ARS</td>
<td>5/8/17</td>
<td>30.5</td>
<td>5/8/17</td>
<td>94.5</td>
<td>29.1</td>
<td>510</td>
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<tr>
<td>South West</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Clark (Charleston)</td>
<td>Western ARS</td>
<td>5/8/17</td>
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<td>OSU South Centers</td>
<td>5/8/17</td>
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<td>96.5</td>
<td>28.8</td>
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At the research vineyard in Wooster, the temperature logger recorded 34.4°F on May 8 and 37.7°F on May 9. Hence, none of the varieties sustained any damage (white frost was observed on the ground though). I would like to use this moment to revisit some concepts and facts about frost, injury, factors impacting injury, and post-injury management practices.

Critical temperature (CT): is defined as the temperature that causes damage after exposure for 30 minutes. Typically, CT is reported as the temperature that causes 10%, 50%, or 90% damage of buds or young shoots. During deacclimation, grapevines become increasingly sensitive to temperature below freezing (32°F) and CT varies with the stage of bud development. That is, buds become more sensitive as they grow in early spring. The following is an example of critical temperatures that cause 50% damage of grape buds and young shoots in Concord.

- Swollen bud stage: 26°F
- Bud burst (break): 28°F
- First unfolded leaf: 28°F
- Second unfolded leaf: 29°F
- Fourth unfolded leaf: 30°F

CT also varies with weather conditions including air relative humidity and corresponding dew point. Dew point (DP) is the temperature at which water condenses out of the air as dew or the temperature that corresponds to 100% relative humidity. Condensation releases heat and slows the drop of air temperature. Thus, if DP is higher than CT, heat will be released before reaching damaging temperatures and may provide some protection. If the air is dry, DP is low and temperature will drop...
rapidly and may reach CT and thus cause more damage. Last week’s event is a white frost, characterized by a high relative humidity, which means that DP temperature was close to air temperature (see figure below). The wetness of grape shoot tissues may have worsened the extent of damage since wet conditions lead to ice nucleation at warmer than cooler temperature (by preventing supercooling).

![Temperature and Humidity 7-9 May 2017 - Wooster Vineyard (BLK C)](image)

Frost damage symptoms: If leaves are already apparent and they are damaged they first look water-soaked, oily, and droopy. In a day or two and when it warms up again, the small shoots turn brown and crispy. Swollen buds in a wooly stage are difficult to assess visually. However, by touching the buds you could feel they’re crispy, crunchy, and brittle and fall off readily.

Shoots are frosted, what now? I know it is human nature when we face a crisis or an issue like this, we are anxious and can't help it and want to do something, anything to remedy a situation. In this case, what to do with damaged shoots? I’ve read the very few reports on managing vines after frost damage and the information is mixed and not consistent. In other words, there is a need for more research on this topic (just like what we experienced with the polar vortex in 2014). I will summarize the different situations reported in California, Virginia, Australian, and New Zealand. In any case, growers need to decide on a strategy: 1) focus on getting any yield from frosted vines this year, or 2) sacrifice some/more yield this year for the benefit of next year’s crop. Also, growers should weigh in the cost of labor involved to remove damaged shoots against the gain of crop salvaged (i.e. is the extra labor worth it?). Having said that, I know most of our growers do
not conduct shoot thinning. This is the year to do it if you have damage so shot thinning will be done to remove damaged shoots and adjust shoot density at the same time.

Damage at early stage of bud development (e.g. buds well to 1-leaf open): in this case, do nothing and young shoots should be left alone. Rubbing off injured swollen buds would risk damaging the remaining secondary buds. Remember grapevines have compounds buds. If the primary shoot is damaged, then the secondary will grow with 30-70-% crop potential.

Damage of more developed shoots with no visible clusters (inflorescences): work in CA showed that cutting (pruning) the damaged shoots at the base was better than rubbing off (removing by hand) the shoots or doing nothing. It appears that the benefits of this practice are variety-dependent since Chardonnay benefited more than Cabernet Sauvignon.

Shoot tips are damaged but clusters (inflorescences) on primary shoots are not damaged: clusters from primary shoots may survive and continue to grow. While vines are recovering, clusters may also be produced from laterals and secondary shoots. This creates the situation of two sets of clusters that may be different in development by 2-4 weeks. In Australia, at harvest time, the maturity difference between the two sets of fruit was negligible. However, this may be tricky with late ripening varieties (e.g. Cab franc) in a short season in Ohio. On the other hand, removing all secondary clusters may promote a more vegetative growth thus undesirable vine balance and fruit quality. This is a situation where growers have to wait and observe fruit development of each variety and the warmth of the growing season and then adjust (or not) the crop accordingly.

Other tips to consider during the season:
First, do not panic! Things may look worse now than few months from now. Grapevines have an amazing way of recovering and compensating for yield. Also, the percent of damage does not equate the percent of crop loss.

The best way to assess crop potential in 2017 is after fruit set when the clusters are visible. Cluster number per vine should give you an idea about percent cluster number loss. Please check this link to estimate your crop: ohioline.osu.edu/hyg-fact/1000/pdf/1434.pdf.
Whether the damage is severe or not, you should not discontinue your disease and insect management program. You need to keep the vine canopy (shoots, leaves, and fruit) healthy.
Fertilization: if the damage is severe and only fruitless shoots recovered, this situation may lead to excessive shoot growth and vigor. You should avoid nitrogen fertilization. If the damage is minimum and a normal crop is expected, continue a normal fertilizer program. If you practice split application of nitrogen (N), skip the first one and then, based on the fruit to shoot growth, decide whether to apply the post-fruit set N application.

Canopy management: due to excessive foliage and resulting shading you may need to be more aggressive with your canopy management practices.

Disaster Assistance: Contact your local USDA-FSA (Farm Service Agency) and report to them your crop loss. It is important that you record the extent of damage you have, in case some assistance program becomes available.

Food for Thought - Things to keep in mind:
Generally, varieties bear fruit on shoots originated from primary buds. Some bear fruit from secondary and base buds. Examples include hybrids such as Seyval, Vidal, Dechaunac, Chancellor, Foch, Baco noir, and Marquette. Secondary and base buds of Vinifera and juice grapes (e.g Concord) are not as fruitful and thus may sustain more crop loss than French Hybrids.

Early frost can be advantageous for secondary clusters to develop larger. Even primary shoots can still develop and produce a crop. In 2016, we had a great summer with plenty of sunlight and heat. Those conditions are ideal for high fruitfulness of buds this year. You may be surprised by a normal crop.
Some growers reported the use of oil (Stylet or Amigo) with different level of success. Some had bud break delay, others did not observe it. In any case, oils would not be effective in this situation since all varieties already broke buds by the time the frost event occurred on May 8th. Many also reported using KDL, just before (24-36hrs) the frost event. Unfortunately, all reported no impact of KDL on preventing or reducing frost injury. It is clear that KDL needs further research to investigate its effectiveness.

Growers used various cultural practices to protect against the frost including high training system, double pruning, mowing the grass, and cultivation of row middles. The success was not as dramatic and obvious as with that observed in good sites or where wind machines were used.

References and additional resources on spring frost and management in grapes:


“The Devastating Frost Hits NE Ohio Vineyards”: www.oardc.ohio-state.edu/grapeweb/images/OGEN_1_June_2010mbp.pdf

“The Frost Damage in OH Vineyards”: oardc.osu.edu/grapeweb/OGEN/05022006/ogen05022006.htm


**Ohio Corn, Soybean and Wheat Enterprise Budgets Project**

**Low to Negative Returns Again for 2017**

Barry Ward- Leader, Production Business Management, Ohio State University Extension

Production costs for Ohio field crops are forecast to be slightly lower to slightly higher in 2017 depending on the crop and the profit picture remains poor, much the same as in 2016. Variable costs for corn for 2017 are projected to be $328 to $407 per acre depending on land productivity. Lower fertilizer costs are offset by somewhat higher fuel, chemical and interest costs.

Variable costs for 2017 Ohio soybeans are projected to range from $194 to $210 per acre. Some minor changes in soybean weed control assumptions led to higher herbicide costs. This higher cost together with higher fuel and interest expense more than offset lower fertilizer and seed costs.
Wheat variable expenses for 2017 are projected to range from $161 to $192 per acre, down slightly from 2016. Lower fertilizer prices are the primary drivers of lower variable costs in 2017 offsetting slightly higher herbicide costs.

With continued low crop prices expected for 2017, returns will likely be low to negative for many producers. Projected returns above variable costs (contribution margin) range from $183 to $342 per acre for corn and $212 to $384 per acre for soybeans. (This is assuming fall cash prices of $3.65 per bushel for corn and $9.40 per bushel for soybeans.) Projected returns above variable costs for wheat range from $112 to $205 per acre (assuming $4.20 per bushel summer cash price).

Returns to land for Ohio corn (Gross Revenue minus all costs except land cost) are projected to range from -$40 to $107 per acre in 2017 depending on land production capabilities. Returns to land for Ohio soybeans are expected to range from $39 to $202 per acre depending on land production capabilities. Returns to land for wheat (not including straw or double-crop returns) are projected to range from -$62 to $25 per acre.

Total costs projected for trend line corn production in Ohio are estimated to be $786 per acre. This includes all variable costs as well as fixed machinery, labor, management and land costs. Fixed machinery costs of $130 per acre include depreciation, interest, insurance and housing. A land charge of $187 per acre is based on data from the Western Ohio Cropland Values and Cash Rents Survey Summary. Labor and management costs combined are calculated at $76 per acre. Returns Above Total Costs for trend line corn production are negative at -$157 per acre.

Total costs projected for trend line soybean production in Ohio are estimated to be $566 per acre. (Fixed machinery costs - $108 per acre, land charge - $187 per acre, labor and management costs combined - $55 per acre.) Returns Above Total Costs for trend line soybean production are also negative at -$66 per acre.

Total costs projected for trend line wheat production in Ohio are estimated to be $540 per acre. (Fixed machinery costs - $126 per acre, land charge - $187 per acre, labor and management costs combined - $38 per acre.) Returns Above Total Costs for trend line wheat production are also negative at -$205 per acre.

These projections are based on OSU Extension Ohio Crop Enterprise Budgets. Newly updated Enterprise Budgets for 2017 have been completed and posted to the OSU Extension Agriculture and Natural Resources Farm Management Tools website: https://aglaw.osu.edu/farm-management-tools/farm-budgets
Let's Eat Local Program Slated for June 13 in Ashtabula

We're part of a free program to be held Tuesday, June 13th, at the Ashtabula Public Library from 6:00-8:00 pm. It will showcase the abundance of local food available from farms, farmers' markets, producers (jams, baked goods, teas), retail stores, processors, and restaurants in Ashtabula County. The event starts with a presentation describing the exploding growth of local farms in our county and the many resources, including how to reach the Master Gardener Volunteer hotline for questions when you're growing your own produce; an explanation of CSAs and who offers them; location & hours of community farmers' markets; locations of meat processors where anyone can purchase fresh or frozen meat; produce available at markets & on farms; details on the 4-H meat auction at the county fair; how to use seed libraries; & locations of community gardens. Participants will then have time to meet a few vendors and sample products. Everyone will leave with a free directory of contact information for 65+ farms and producers. See the attached flyer for more information.

David’s Weekly News Column

Hello, Ashtabula County! What do Jackson Bogardus, Deanna Comp, Christiana Crites, Allison Crouch, Hollie Dalton, Tyler Dunbar, Raeann Eldred, Sarah Hermann, Andrew Holden, Lisa Kalas, Jessica Krulic, Bailee Mazzaro, Calla Mazzaro, Sydney Millard, Katie Stokes and Rachel Yilit all have in common? If you guessed they are very bright, talented, and goal oriented young people, you are correct! Because of these qualities and many more, they were selected to be recipients of a 2017-2018 Agricultural Scholarship Fund Award.

The Ashtabula County Agricultural Scholarship Fund was founded on April 29, 1952 by a group of local leaders to help promote interest in the study of agriculture, home economics, environmental sciences, and natural resources. Since then, the committee has grown to include additional community scholarships which are open to any student regardless of the college major. This scholarship program is driven by a super group of Ashtabula County volunteers and supported by countless families, agribusiness firms and prior recipients.

This year, I am very pleased to announce the scholarship committee was able to present a total of $21,000 in scholarship money to sixteen outstanding young people. This is the most money ever given in the history of the scholarship fund! It was a tough selection process for our committee as we were impressed with all the applications submitted for consideration. The scholarship recipients chosen were:

Katie Stokes, daughter of Kenny & Tammy Stokes of New Lyme, is the recipient of the $1,000 Alan C. Jerome Memorial Scholarship and a $500 Lester C. Marrison Memorial Scholarship. Katie will graduate from Pymatuning Valley High School this spring and will attend The Ohio State University next fall majoring in Biology.
Calla Mazzaro, daughter of Tom and Charity Mazzaro of Williamsfield, is the recipient of a $1,500 Service-Jerome Scholarship. Calla is a 2016 graduate of Pymatuning Valley High School and is currently attending The Ohio State University majoring in Animal Science with a BioScience Specialization.

Tyler Dunbar, son of Diana Dunbar and Eric Dunbar of Williamsfield, is the recipient of a $1,000 Service-Jerome Scholarship and a $500 Ashtabula County Ag Scholarship. Tyler will graduate from Pymatuning Valley High School this spring and will attend The Ohio State University next fall majoring in AgriScience Education.

Andrew Holden, son of Glen and Robin Holden of Pierpont, is the recipient of a $1,000 Service-Jerome Scholarship and a $500 Ashtabula County Ag Scholarship. Andrew is 2015 graduate of Pymatuning Valley High School and is attending The Ohio State University majoring in Agribusiness and Applied Economics with a minor in Agronomy.

Bailee Mazzaro, daughter of Tom and Charity Mazzaro of Williamsfield, is the recipient of a $1,000 Service-Jerome Scholarship and a $500 Ashtabula County Ag Scholarship. Bailee is 2014 graduate of Pymatuning Valley High School and is attending The Ohio State University majoring in Agricultural Communications.

Sydney Millard, daughter of Lynne and Scott Millard of Pierpont, is the recipient of the $1,000 Lester C. Marrison Memorial Scholarship and a $500 Ashtabula County Ag Scholarship. Sydney will graduate from Pymatuning Valley High School this spring and will be attending the Ohio State University next fall majoring in Actuarial Science.

Raeann Eldred, daughter of Myron and Rosmarie Eldred of Kingsville, is the recipient of a $1,500 Ashtabula County Holstein Club Scholarship. Raeann is a 2016 graduate of Edgewood High School and is currently attending The Ohio State University majoring in Early Childhood Education.

Lisa Kalas, daughter of Janet and George Kalas of Jefferson, is the recipient of the $1,000 Kellogg Memorial Scholarship and a $500 Ashtabula County Holstein Club Scholarship. Lisa is a 2014 graduate of Jefferson High School and is currently attending Lake Erie College majoring in Business Administration with a minor in accounting.

Allison Crouch, daughter of Beth and Ken Crouch of Cherry Valley, is the recipient of the $1,000 Harold & Dick Springer Memorial Scholarship and a $500 Ashtabula County Ag Scholarship. Allison is a 2015 graduate of Pymatuning Valley High School and is currently attending Wilmington College majoring in Agricultural Education and Agronomy.

Deanna Comp, daughter of Jerry Comp of Dorset and Linda Comp of Jefferson, is the recipient of the $1,000 Christopher L. Zaebst Memorial Scholarship. Deanna is 2015 graduate of Jefferson High School and is currently attending Kent State University majoring in nursing.
Hollie Dalton, daughter of Bobbi and Mark Dalton of Ashtabula, is the recipient of the $1,000 Prochko Memorial Scholarship. Hollie will graduate from Jefferson High School this spring and will be attending Youngstown State University next fall majoring in Pre-Veterinary Biology.

Jackson Bogardus, son of David and Sarah Bogardus of Andover, is a recipient of a $1,500 Ashtabula County Ag Scholarship. Jackson is a 2015 graduate of Pymatuning Valley High School and is currently attending Hocking College majoring in Wildlife Resource Management.

Sarah Hermann, daughter of Mary Anne and Ray Hermann of Conneaut, is a recipient of a $1,000 Ashtabula County Ag Scholarship. Sarah is a 2012 graduate of Conneaut High School and will be attending Kent State University-Trumbull next fall majoring in Veterinary Technology.

Rachel Yilit, daughter of Jan and Mike Yilit of Kingsville, is recipient of a $1,250 Centerra Co-op Scholarship. Rachel is a 2013 graduate of Charleroi School District and is currently attending Kent State University-Ashtabula majoring in nursing.

Jessica Krulic, daughter of Karla and Tony Krulic of Cherry Valley, is a recipient of a $1,250 Centerra Co-op Scholarship. Jessica is a graduate of 2013 graduate of Pymatuning High School and a 2017 graduate of Hiram College where she majored in accounting. She will be attending Ohio Northern University for her Master's Degree next fall.

Christiana Crites, daughter of Donald and Tracy Crites of Geneva, is the recipient of the $500 Lautanen Family 4-H Scholarship. Christiana will graduate from Geneva High School this spring and will be attending Lakeland Community College next fall majoring in Radiology Technology.

Ashtabula County, you should be proud of Jackson, Deanna, Christiana, Allison, Hollie, Tyler, Raeann, Sarah, Andrew, Lisa, Jessica, Bailee, Calla, Sydney, Katie, and Rachel. They are super individuals and a great reflection of all that is good in Ashtabula County.

To close, I would like to leave you with a quote from Helen Keller who stated, “Character cannot be developed in ease and quiet. Only through experience of trial and suffering can the soul be strengthened, ambition inspired, and success achieved.” Have a good and safe day!

**Alien Plants Beget Alien Insects**

Garden Reflections by the Ashtabula County Master Gardeners-

Sometime around 1912, nurseryman Henry Dreer imported some Asian iris bulbs. Unbeknownst to him, Japanese beetle larvae were nestled among the plant's roots and emerged later as hungry adults. The females laid eggs in Henry's lawn and Japanese beetles quickly spread everywhere east of the Mississippi. They are now hungrily heading west.

While these Asian insects are likely homeowners' most annoying pests, they serve as an excellent example of how alien insects are introduced to our landscapes. With
no insect enemies to keep them under control, aliens procreate rapidly and happily chomp away at anything that pleases their palate.

Other insects from Asia have arrived on our shores in similar ways. While they haven't been as pesky for homeowners, they are having a far more serious impact on ecosystems. The hemlock wooly adelgid, for instance, arrived in Virginia on nursery stock in 1950. As Doug Tallamy points out in his book, Bringing Nature Home, they can kill a mature tree in four years and are now threatening the forests of the Appalachians.

In Ashtabula County we are experiencing our own devastation with the loss of ash trees to the emerald ash borer (EAB). Introduced from Asia to North America in the 1990s, EAB has already killed tens of millions of ash trees in Michigan alone. As the weather warms and our local trees leaf out, you'll notice dead ones standing in woods along Route 90. Most of those are ash.

The consequences to business are dire. Prices of ash have fallen over the last few years because so many infected trees are being harvested. But what happens when there are no ash trees left? We will have lost a species worth billions of dollars to the lumber industry.

Even more troubling is the effect the loss of ash trees is having on the forest habitat. According to research published by The Ohio State University, at least 282 arthropods (insects and spiders) rely on North American ash trees as a source of food and shelter.

Indeed, at least 44 species, including some butterflies, beetles, moths, flies, and true bugs, are at risk of extinction because they feed exclusively on ash trees. When these are gone, the wildlife that depends on those arthropods for a food source will also suffer.

Studies conducted in Michigan where forests have been impacted for several years have found no viable ash seeds and no new germinating ash seedlings. With no seed bank present in the soil, ash trees are not likely to return to these areas.

Research also suggests that as ash trees die and gaps in the canopy increase, resulting light will encourage the spread of invasive exotics, such as oriental bittersweet, Japanese honeysuckle, multiflora rose, and Russian autumn olive. If these species out-compete native plants in those areas, the native birds and wildlife that feed only on native species will most certainly decline.

There is no point in planting ash trees in our yards until the EAB is long gone. Perhaps when the EAB has eaten itself into extinction, the efforts of the National Ash Tree Seed Collection Initiative will prove successful, and ash trees will once again rise in our woodlands.
For now, we need to reconsider our love affair with exotic plants and reconnect with the natives that provide food and homes for our native insects, birds and other wildlife. It is sad to lose our ash trees. It would be far more tragic to lose those creatures whose very lives depend on the native species that are disappearing from our landscapes.

Ashtabula County Master Gardeners will be focusing on the importance of native plants in 2017. Articles will include ways to go native, saving monarch butterflies, the dangers of alien invasives and landscaping for birds and other wildlife.

**Upcoming Extension Program Dates**
The following programs have been scheduled for Northeast Ohio farmers. Complete registration flyers can be found at: [http://ashtabula.osu.edu/program-areas/agriculture-and-natural-resources/upcoming-educational-programs-deadlines](http://ashtabula.osu.edu/program-areas/agriculture-and-natural-resources/upcoming-educational-programs-deadlines)

**Fertilizer Certification Sessions**
June 14 at Ashtabula County Extension Office from 9:00 to 12:00 noon
August 17 at Trumbull County Field Day (location TBD) from 9:00 a.m. to 3:00 p.m.
September 14 at Geauga County Extension Office from 1:00 to 4:00 p.m.

**Private Pesticide Applicator Recertification Sessions**
November 16, 2017 from 1:00 to 4:00 p.m. in Lake County
January 12, 2018 from 9:00 to 12:00 noon in Ashtabula County
February 2, 2018 from 1:00 to 4:00 p.m. in Geauga County
February 9, 2018 from 9:00 to 12:00 noon in Portage County
March 9, 2018 from 9:00 to 12:00 noon in Trumbull County

**2018 Northeast Ohio Winter Agronomy School**
Wednesday February 21, 2018

**2017 Ashtabula County Beef Banquet**
Saturday, November 11, 2017

**21st Annual Joe Bodnar Memorial Northern Classic Steer & Heifer Show**
Saturday, April 21, 2018
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<th><strong>David Marrison</strong></th>
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<td>Ashtabula County Extension Office</td>
<td>Trumbull County Extension Office</td>
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<tr>
<td>39 Wall Street</td>
<td>520 West Main Street</td>
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<tr>
<td>Jefferson, OH 44047</td>
<td>Cortland, OH 44410</td>
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<tr>
<td>440-576-9008</td>
<td>330-638-6783</td>
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2017 SMALL GRAINS FIELD DAY

Tuesday, June 13, 2017 • 9:30 A.M. - 3:15 P.M.
Ohio Agricultural Research and Development Center
Schaffter Farm
3240 Oil City Rd.
Wooster, OH 44691

Program
- Wheat Disease ID and Management
- Wheat Breeding: Developing Disease Resistant Varieties
- Wheat Quality Evaluation
- Use of Small Grain Cover Crops in Soybean Production
- Crimping and Planting Demonstrations
- Winter Two-Row Malting Barley Development
- Reduced Lignin Alfalfa: Getting More With Less
- Kernza Perennial Grain Update
- Small Grain Baleage
- The Importance of Wheat Harvest Date
- Wheat Nitrogen and Growth Promoter Application Demonstration
- Organic Oats and Red Clover Plots (Optional)

Sponsors
- Ohio Corn and Wheat Growers Association
- Ohio Seed Improvement Association
- Ohio Soybean Council

Education Credits
Pesticide Re-certification and CCA credits are available

For More Information
Rory Lewandowski
lewandowski.11@osu.edu
Wayne County Extension Office, 330-264-8722

PRE-REGISTRATION IS REQUIRED. $25 per person (includes lunch/refreshments/handouts.) Registration deadline is June 5. Registrations received after June 5, $35 per person. Make checks payable to Ohio State University Extension Wayne County. Mail to Wayne County Extension, 428 W. Liberty St., Wooster, OH 44691. Please detach and return this form with your payment. You may also register online: regonline.com/smallgrains.

Thank you!

Name(s): _______________________________________________________
Address: _______________________________________________________
Phone number and email address: ___________________________________

☐ Please check the box if you have mobility restrictions and would like assistance to view the field plots.
Discover the abundance of Ashtabula County

**Let’s Eat Local!**

On Tuesday, June 13, 2017 join us for a free program “Let’s Eat Local!” at the Ashtabula Public Library, 4335 Park Avenue in downtown Ashtabula from 6-8PM.

Get to know Ashtabula County farmers and producers. Learn where to purchase local foods and farm products, such as

- Vegetables
- Fruit
- Honey
- Eggs
- Maple syrup
- Meat
- Cheese
- and more

Sample food products and receive a free local food directory.

Sponsored by the Master Gardener Volunteers of Ashtabula County, Ashtabula Local Food Council and the Ashtabula County Community Action Agency.
Little tick...

BIG PROBLEM
Lyne disease

Lyme Disease Symposium
May 26, 2017 | 6 pm to 9 pm
ACC-Family Life Center
150 Stillman Ave
Andover, OH 44003

We invite you to join us for an evening of education and awareness.

May is Lyme disease awareness month!

Keynote Speaker: Dr. Charles Ray Jones, LLMD
Karen Holen, DC
Dr. Charles Curie, Veterinarian
Megan Tilton, Lyme disease warrior

Question and answer session to follow.
Literature and handouts available

Contact Connie Moschell for further information at 440-858-5396

Tickets by donation available at the door or by visiting https://www.eventbrite.com/e/lyme-disease-symposium-tickets-32820644431?aff=efbevent